



## REMARKS

This paper is in response to the Office Action of August 29, 2001. The Applicants have amended claims 1, 3,4,18, and 20. Dependent claim 3 was amended into independent form to include the limitations of claim 1. Claims 19 and 22-24 were canceled. Claims 1-18 and 20-21 remain pending in this case.

### **Rejection under 35 U.S.C. § 103**

Claims 1-11 and 13-21 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Wollrath et al. ("Wollrath") (U.S. Pat. No. 6,263,350) in view of Leong et al. ("Leong") (U.S. Pat. No. 6,269,398). This rejection is respectfully traversed.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one having ordinary skill in the art, to combine the references. Additionally, the references when combined must teach or suggest all the claim features. As discussed below, the Office has not established a *prima facie* case of obviousness because one having ordinary skill in the art would not have combined the references in the manner proposed.

Wollrath teaches techniques for handling the usage of resources, namely memory resources, in a distributed computing environment. When multiple computer programs or objects use memory to complete an operating task, the memory is allocated to that computing entity until it no longer needs the memory. However, in some cases, the allocated memory is not de-allocated and made available to other computing entities. For this reason, Wollrath uses an improved technique for "garbage collecting." The garbage collecting techniques ensure that memory resources get de-allocated when no longer in use by computing entities.

Leong teaches methods for discovering "router" entities in order to create graphical user interfaces. The graphical user interfaces can be used to generate icons for controlling aspects of the routers. In teaching these methods, Leong discloses methods for discovering connections of the routers to better interface with a wider area network.

Firstly, neither Wollrath nor Leong disclose or suggest methods for managing storage enclosures having arrays of disks, such as those used in a RAID environment. Although Wollrath and Leong generally teach the networking of computers, neither reference teaches the use of a client computer to access a storage enclosure connected to a server component to enable full configuration and management. Also, neither cited reference suggests the configuration and management of a RAID array of disks from a remote client. For purposes of clarity, the Applicants have amended claim 1 to further define that the storage enclosure as a RAID array of disks. As one skilled in the art will know, the management of "memory resources" as taught by Wollrath does not equate to the management of multiple disks. Furthermore, the combined teachings of Leong would not suggest either of claimed combinations of independent claims 1, 3, 18, and 21. Plainly stated, no teaching in Wollrath points to the management of arrays of disks, and no teaching in Leong suggests the creation of graphical user interfaces for managing the arrays of disks from a networked client.

It is important to note that disk array configuration and management has traditionally been administered at a local computer (e.g., at a server). This prior art requirements is due to the fact that drives are generally associated with a particular server computer, having a particular RAID controller--thus necessitating the local administering of the RAID array by a network administrator.

The Applicants have also converted claim 3 into an independent claim, to further define another inventive embodiment of the present invention. In claim 3, the array builder link is specifically defined. The array builder link provides selection tabs to allow array building from an array template or from scratch. Again, array building is a task that generally takes place locally with a number of complicated software drivers, and not conventionally viewed as possible to network.

In reference to the Examiner's Official Notice regarding claim 12, the Applicants would like to point to a recently decided Federal Circuit case, in which the Court specifically noted that Office Notice may not be taken, absent some specific teaching in the record. *See In*

re Zurko, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001). Although, the Applicants submit that dependent claim 12 is patentable for at least the same reasons claim 1 is submitted to be patentable.

It is submitted that one skilled in the art of disk array creation, setup, configuration, and management, would not look to Wollrath, as memory space allocation and de-allocation is not related to disk array management, and further more, a process for management storage as claimed in this application would not look to Leong, as router discovery is also not related to disk array management. For at least these reasons, the Applicants respectfully request that that rejections of independent claims 1, 3, 18, and 21 be withdrawn.

For at least the same reasons, the Applicants respectfully submit that the dependent claims are patentable over the cited art of record.

Accordingly, a notice of allowance is respectfully requested. If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6903. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. ADAPP091A). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,  
MARTINE & PENILLA, LLP

A handwritten signature in black ink, appearing to be 'A. Penilla', with a long horizontal line extending to the right.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

de Jong et al.

Application No: 09/275,727

Filed: March 24, 1999

For: STORAGE AREA NETWORK  
ADMINISTRATION



)  
) Examiner: Tran, M  
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) Art Unit: 2771  
)  
) Attorney Docket No: ADAPP091A  
)  
) Date: November 29, 2001

**MARKED UP CLAIMS**

1. (Amended) A storage area network management and configuration system, comprising:

an enterprise network including a plurality of computer systems, wherein some of the plurality of computer systems include a server component, some of the plurality of computer systems include a client component, or both the client component and the server component;

a storage enclosure being connected to a computer system having at least the server component, the storage enclosure having a RAID array of disks; and

a graphical user interface provided by the client component, the graphical user interface provides a graphical representation and icon links to configuration tools for controlling the RAID array of disks of the storage enclosure.

3. (Amended) A storage area network management and configuration system [as recited in claim 1,] comprising:

an enterprise network including a plurality of computer systems, wherein some of the plurality of computer systems include a server component, some of the plurality of computer systems include a client component, or both the client component and the server component;

a storage enclosure being connected to a computer system having at least the server component;

a graphical user interface provided by the client component, the graphical user interface provides a graphical representation and icon links to configuration tools for controlling the storage enclosure, [wherein] the graphical representation and icon links to configuration tools [comprise:] further includes,

an array builder link, the array builder link when selected provides selection tabs to allow array building from an array template or from scratch.

4. (Amended) A storage area network management and configuration system as recited in claim 3, wherein the array building from an array template, comprises:

[selecting] hardware being selectable [to] for configuration [configure], the hardware to configure is selected from the storage enclosure or from additional storage enclosures that are connected to the enterprise network;

[selecting] an array template that contains a RAID configuration scheme that is optimally selected for a particular storage application; and

code for dragging the selected array template, that is in the form of an icon, over the selected hardware or dragging the selected hardware over the selected array template, the dragging is configured to automatically apply the RAID configuration scheme.

18. (Amended) A storage area network system, comprising:

a server computer system being connected to an enterprise network;

a storage enclosure being connected to the server computer system;

a client computer system having a graphical user interface control for enabling a user to remotely configure drives of the storage enclosure, the drives of the storage enclosure being an array of drives.